rain, making puddles which, if they last for several days, can become an area for mosquitoes to breed.

Reduce mosquito breeding habitat

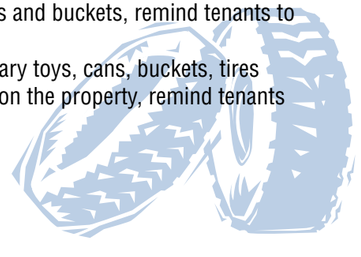
Public Health - Seattle & King County expects to confirm WNV will be in King County this year or next. There are numerous things that can be done to help reduce mosquito habitats, whether you manage pools and/or spas for apartment complexes, condominiums, hotels, motels, communities, clubs, organizations, or private residences. The bottom line is that you should minimize opportunities for mosquitoes to breed in your pool/spa areas.

How-to Tips

- Walking surfaces and equipment rooms should slope to drain to prevent standing water
- Filter backwash should discharge to waste in a manner that prevents standing water
- Maintain effective disinfectant in swimming pool/spa water at all times
- Continue to maintain effective disinfectant in pools that are no longer in service
- Fill in abandoned swimming pools/spas with appropriate backfill per WAC 246-260-170. This will prevent standing water and potential mosquito breeding areas
- Maintain outdoor pool covers so that water does not collect on them

Other yard maintenance tips

- Clean, aerate, and regularly maintain garden/ornamental ponds
- Empty containers that hold standing water
- Repair leaky outdoor faucets and sprinkler systems
- Eliminate stagnant puddles lasting more than 7 days
- Unclog all gutters and roof drains
- Avoid over watering ground plants and lawns
- Maintain shrubs and bushes, allowing light and airflow through plants provides fewer places for mosquitoes to hide
- Make sure window and door screens are repaired or replaced to prevent insects from entering residences
- Cover garbage cans and recycle bins with appropriate lids
- Empty water from flowerpot dishes, remind tenants to do the same on decks and porches
- Tip out standing water from toys, "kiddy" pools, cans, plastic covers and buckets, remind tenants to do the same
- Clean up unnecessary toys, cans, buckets, tires and plastic covers on the property, remind tenants to do the same



Who's Who

Seattle King County Environmental Health Offices

There have been a few changes this year in the pool program. The following are the environmental health representatives who work in the Water Recreational Facilities Program:

Section Manager **Phil Holmes 206 296-4632**
Senior Pool Program Technical Advisor
Eileen Hennessy 206 296-4632

Alder Square **206 296-4708**
1404 Central Ave. So. Suite 101 Kent, WA 98032

Supervisor **Gale Yuen**
Senior **Patrick Murphy**
Serves the South and West regions of King County

Downtown **206 296-4632**
2124 4th Ave, 4th Floor, Seattle WA, 98121

Supervisor **Todd Yerkes**
Senior **Rosemar y Byrne**
Serves the City of Seattle

Northshore **206 296-9791**
10808 NE 145th St. Bothell WA. 98011

Supervisor **Dan Moran**
Senior **Phil Wyman**
Serves the North and East Region of King County

Contact us at any time on our website:
www.metrokc.gov/health/pools

For more information

WNV Hotline: (206)-205-3883
Website: http//www.metrokc.gov/health/westnile

State Code Update
The process to develop a new state pool code is continuing at the State Department of Health. For questions about the process or the draft code, contact Gary Fraser at (360) 236-3073.

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Splash!

Public Health - Seattle & King County's Newsletter for Pool and Spa Operators and Owners April 2003

Loss of local and state tax subsidies requires Board of Health to increase pool fees for 2003

In order to maintain existing levels of service, the King County Board of Health approved fee increases for pools and spas effective January 1, 2003. These increases are for Construction Permits and Operational Permit fees.

The costs of the Water Recreation Program were subsidized by local tax dollars until this year. Losing this subsidy in 2003 means that the Water Recreation Program must recover the actual costs of providing the services. (please see a description of public health services on page 2)

Fee schedule for pools and spas

Operating Permits (annual)

- Water recreation facility (WRF) **$421.00**
- Additional WRF operated by same person at same location **$285.00**

Miscellaneous Fees

- After-hours inspection requested **$142.00 an hour**
- Re-inspection fee **1/2 permit fee**
- Reinstatement after suspension **Full permit fee**
- Pre-occupancy inspection after initial pre-occupancy inspection **$256.00**

Construction Permits

New water recreation facility

2,500 square feet or more **$882.00 base fee**
for pre-occupancy inspection and consultation costs, payable at the time of application, plus $142.00 per hour for the actual time spent reviewing plans and specifications, payable at the time of final approval

Less than 2,500 square feet **$611.00 base fee**
for pre-occupancy inspection and consultation costs, payable at the time of application, plus $142.00 per hour for the actual time spent reviewing plans and specifications, payable at the time of final approval

Renovation* **$299.00 base fee**
for pre-occupancy inspection and consultation costs, payable at the time of application, plus $142.00 per hour for the actual time spent reviewing plans and specifications, payable at the time of final approval

*Renovation includes extensive changes in equipment, piping, barriers, walking surfaces, pool appurtenances, filtration equipment, mechanical equipment or pool structure costing more than $5,000.00

Alteration* **$256.00 base fee**
for pre-occupancy inspection and consultation costs, payable at the time of application, plus $142.00 per hour for the actual time spent reviewing plans and specifications, payable at the time of final approval

*Alterations include changes in equipment, piping, barriers, walking surfaces, pool appurtenances, filtration equipment, pumps, or other mechanical equipment, or pool structure costing $5,000.00 or less

Plan Re-submittal **$142.00 per hour**
for the actual time spent reviewing plans and specifications, payable at the time of final

Why is Public Health involved with your facility?

Pools and spas can be a source of accidents, illness, and rashes. Accidents include slips, falls, and drowning. Illnesses and rashes that have been caused by known bacterial, viral, parasitic agents at pools and spas include E. coli 0157:H7, Shigellosis, Leptosprirosis, Legionellosis, Pseudomonas, Norwalk Virus, Hepatitis A, Adenovirus, Giardiasis, and Cryptosporidium. The safety and health rules that owners are required to follow are designed to keep the risk of accidents, illness, and rashes low.

Public Health - Seattle & King County's Water Recreation Program inspects approximately 1,900 public swimming pools, spas, and special purpose pools in King County to ensure these pools and spas are built, maintained and operated for the safety and health of bathers in accordance with Washington State and King County laws.

Public Health
Seattle & King County
HEALTHY PEOPLE. HEALTHY COMMUNITIES.

City of Seattle King County

What does Public Health do to ensure the risks are low?

- Conducts pre-occupancy, routine, follow-up and complaint inspections at water recreation facilities.
- Reviews and approves plans for construction, alter ation or renovation of all water recreation facilities.
- Tests pool water for pH, free chlorine residual, com bined chlorine, alkalinity and, when necessary, cyanuric acid.
- Verifies the maintenance of the pool fence, gates, doors and windows to prevent access to children.
- Evaluates the clarity of the water and the ability to see the bottom of the pool. These are necessary for rescue efforts.
- Evaluates the pool's re-circulation and disinfectant systems, including filters, pumps, skimmers, main drain, return lines, flowmeter, and pressure gauges.
- Reviews and investigates illness and injury reports and responds to complaints.

When an injury or illness happens at your pool....

Owners must report all serious injuries requiring emergency aid from "911," immediate medical treatment at a clinic or emergency room, and/or hospitalization. Reporting is done on the Illness and Injury Report Form, available on line at http://www.metrokc.gov/health/pools, or by calling 206-296-4632. The form must be completed and returned *within 48 hours of the accident* to:

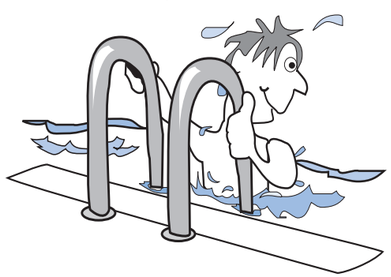
Public Health - Seattle & King County
Environmental Health Division
2124 4th Avenue, 4th Floor
Seattle, Washington 98121

Avoid additional Fees in 2003

Keep Your Pool And SPA Safe and Healthy

You keep the risks of illness, rashes and injury low when you keep your facility free of critical violations.

Keep your pools and spas safe and healthy AND your costs for re-inspection and reinstatement at $0. Avoid the ten most common Pool and Spa Violations listed in the chart.



Ten Most Common Pools/Spas Violations for 2002 in King County

Common Violations (critical items may be cause for immediate closure)	Percent of violations found on Routine Inspections
Failure to maintain proper disinfection level	23%
Failure to maintain barriers (gates, fences, walls and doors accessing pool enclosure) or improperly maintained	10%
Failure to maintain pH within 7.2 – 8.0 range	8%
Failure to maintain monitoring & record keeping as required.	8%
Failure to maintain first aid kit and/or blankets	7%
Failure to maintain inlet and overflow system as required	5%
Failure to maintain required signage and/or conspicuously posted signage	5%
Failure to maintain max. pool temperature at 104° F or below	4%
Failure to maintain stairs with visible, contrasting colored non-slip tread, and/or failure to maintain secure handrails	4%
Failure to maintain or provide phone and/or emergency response equipment	4%

Keep the disinfectant at the correct level to prevent disease.

The most common reason pools and spas are closed by Public Health in Seattle and King County each year is for not maintaining proper disinfectant levels.
Use the chart below to evaluate

Correct pH levels are essential to the health of people and pools

A *low* pH (acidic) can corrode pipes and equipment, dissolve tooth enamel as well as pool plaster, and the grout between pool tiles.

A *high* pH (basic) can reduce the effectiveness of disinfectants, encourage the growth of algae, and damage pool equipment by forming scales.

A low or a high pH can irritate the eyes.

Low pH							Ideal pH						High pH
Increasingly acidic							Neutral			Increasingly basic			
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

A pH between 7.4 and 7.6 is the ideal pH for pools or spas because:

1. it mirrors the human body's pH, and is therefore comfortable for swimmers.
2. the pool equipment life is extended.
3. the pool disinfectant action is most effective within this range.

Minimum And Maximum Levels of Disinfectants in parts per million (ppm)

Disinfectants	Type of Residual*	Minimum Residual Levels of Disinfectants in ppm			Maximum Residual ppm
		pH Ranges 7.2-7.49	7.5-7.79	7.8-8.0	
Chlorine	Free available chlorine		**Pool**		
		1.0	1.4	1.8	6
			Spa		
		2.5	2.9	3.3	10
Chlorinated Cyanurate	Free available chlorine		**Pool**		
		1.5	2.0	2.8	6
			Spa		
		3.0	3.5	4.3	10
Bromine	Total available bromine		**Pool**		
		2.0	2.5	3.5	6
			Spa		
		3.5	4.0	5.0	10

* Maximum residual as noted or manufacturer's recommendation's (whichever is less).

Is Your Pool "Childproof?"

Children are attracted to water like a magnet. Failure to maintain barriers to pools and spas was cited in 10% of the routine inspections during 2002. The gates, fences, walls, and doors accessing the pool enclosure were incorrect or improperly maintained leaving pools and spas open to children. This is a critical violation and may lead to a re-inspection or closure of the facility, with further re-inspection and reinstatement costs to the owner.

Please complete the following checklist to make sure your pool or spa is childproof.

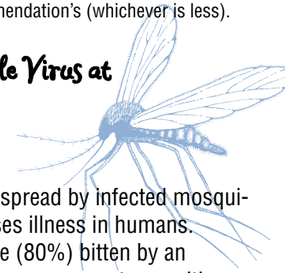
Does your gate close automatically behind you when you walk into the pool area? If you have a pool without a lifeguard, the gates and doors must close and latch or lock by themselves, without your assistance ("self close" and "self-latch").

Is the latching mechanism 54 inches or higher on the gate or door? If it is 54 inches or higher, the gate or door needs to be self-closing and self-latching. Check regularly to ensure it continues to latch and close correctly.

Is the latching mechanism lower than 54 inches? If so, the gate or door must be continuously locked from outside access, and only opened by a key or other access controlled system. Check regularly to assure your doors and locks are still working properly.

Do you have a fence surrounding your outside pool? Does your fence have any gaps greater than four inches or structures leaning against it that would allow a child to climb through or over the top? Fences and gates require maintenance to assure they're effective barriers, so children don't have easy access to your pool. The hazard is real. Ninety-five percent of children under nine are able to get through a six inch opening.

Reduce the risk of West Nile Virus at your pool/spa facility



What is West Nile Virus?

West Nile virus (WNV) is a virus spread by infected mosquitoes. The virus occasionally causes illness in humans. Though the majority of the people (80%) bitten by an infected mosquito never experience any symptoms with WNV, about 20% of people infected do come down with flu-like symptoms. These symptoms include fever, muscle aches, tiredness, headache, and joint pains. One percent of people infected with WNV *may* develop a severe illness, including encephalitis or meningitis. These symptoms may include a high fever, neck stiffness, convulsions, muscle weakness, confusion, paralysis, and coma. There is no vaccine for people available at this time.

Even though infected mosquitoes spread WNV, not all species of mosquito carry the virus. There are many species of mosquitoes, but only a few species are capable of carrying the virus. Mosquitoes become infected by feeding on infected birds. The virus lives in the mosquito's saliva and is transmitted when an animal or person is bitten. There is no evidence at this time that the WNV is spread under normal circumstances from person to person, animal to person, animal to animal, or bird to person.

How could pools/spas play a role in mosquito habitat?

Mosquitoes that can carry West Nile Virus lay their eggs in shallow water. Outside pools and spas that are no longer being used are sites for female mosquitoes to lay their eggs. Even the covers on operational pools and spas can collect